INTERNET ANSWERING MACHINE

This application is a continuation of U.S. patent application Ser. No. 08/554,744, filed Nov. 7, 1995 now abandoned.

BACKGROUND OF THE INVENTION

A telephone answering machine is an electronic device that automatically answers an incoming telephone call, plays a pre-recorded message, and records a message that the caller leaves. The machine typically has one or two magnetic tape cassettes or a digital memory for storing the outgoing and incoming messages. The machine may have a display for indicating the number of messages received and the time and date they were received. A user can listen to the recorded messages using controls on the machine or via a remote telephone connection by pressing keys on the remote telephone keypad.

Although an answering machine is traditionally a dedicated, integrated device that plugs into the telephone line, a general-purpose personal computer may also perform the above-described answering machine functions. Circuit cards and associated software to facilitate answering machine functions are commercially available for personal computers. As a result, the computer may display on its screen the number of received messages and time of day they were received and may play back the recorded messages through its speakers.

An increasingly common method for sending messages is known as electronic mail ("email"). A person can use a remote computer and modem to send messages to a central computer via a telephone connection. The central computer stores the message as well as the identity of the sender and intended recipient. The recipient can use another remote computer and modem to establish a telephone connection with the central computer and read or download any messages stored there that are intended for him to receive. An email message generally includes ASCII-encoded text and may also include an "attachment" consisting of a digitized image or digitized audio (voice). Companies having such central computers that facilitate email communication between remote users are known generally as "on-line service providers." People who wish to use the email service pay fees to the on-line service provider and are known as subscribers or customers. Examples of well-known on-line service providers include COMPUSERVE, PRODIGY, AMERICA ON-LINE, FIDONET and BITNET.

Many on-line service providers also provide access to the computer network known as the Internet. The Internet is a global super-network comprising numerous sub-networks. The service provider maintains a computer on one of the sub-networks that functions as a "gateway" onto the Internet for its customers' computers. People all over the world can send and receive email with each other through service providers that provide Internet gateways. Service providers use standard, well-known protocols to send and receive email via the Internet, such as Simple Mail Transfer Protocol (SMTP) and Post Office Protocol (POP), which are part of the suite of over 100 protocols known as Transmission Control Protocol/Internet Protocol (TCP/IP). They may also use TELESCRIPT protocols developed by General Magic Corp. of Sunnyvale, Calif. Although the most common method by which individuals access the Internet is via a service provider's gateway, any computer having the necessary hardware and software can be connected directly to the Internet.

An email message comprises a header, which includes the sender's address (source address) and the recipient's address (destination address), and the body of the message, all encoded in accordance with these protocols. As noted above, the body of the message typically includes ASCII-encoded text and may also include a digitized image or audio attachment.

To retrieve email from a service provider, the subscriber uses a computer and a modem, under the control of software that is typically provided by the service provider, to call and communicate with the service provider's computer via the telephone system. When the service provider's computer answers, it typically queries the subscriber for a username and password. If the subscriber enters the correct username and password, the service provider's computer "logs in" the subscriber and allows the subscriber to perform various functions, including determining whether email messages intended for the subscriber have been received and stored and, if so, downloading the email messages to the subscriber's computer. When the subscriber is finished, the subscriber logs out and terminates the telephone call.

Software is known that causes a computer and modem to periodically, e.g., once every hour, call a service provider, log in, determine whether any email messages have been received and stored, download any such email messages, and then log out and hang up the call. The Mail Handling System (MHS), produced by Novell Corporation, is an example of such software that can be run on a Novell network server.

It would be desirable to provide a system for conveniently storing and playing back both voice and email messages received via the telephone system. These problems and deficiencies are clearly felt in the art and are solved by the present invention in the manner described below.

SUMMARY OF THE INVENTION

The present invention is an integrated answering machine system for recording both telephone and email messages. The system includes an integrated answering machine device and the method by which it receives and records messages.

The answering machine includes a telephone line interface, a modem, a processor and associated memory, recording means, a speaker, a display, and a keypad or other suitable input means. When the answering machine detects a ring signal on the telephone line to which it is connected, it answers the call. The answering machine plays an outgoing message for the caller to hear and records the caller's incoming voice message. Periodically or at predetermined times, the answering machine may check for email messages by calling a service provider. When the service provider answers the call, the answering machine logs in, downloads and stores at least a portion of email messages that have been received. For example, the answering machine may download only header information that indicates the identity of the sender. Alternatively to periodically calling the service provider, the answering machine may wait for the service provider to call. When the answering machine answers a call, before playing an outgoing message, it may read the telephone number of the calling party using the Calling Number Delivery (CND) service, often referred to as "Caller ID," that many telephone companies provide. If the telephone number is that of the service provider, the answering machine does not play an outgoing message but rather logs in to the service provider and downloads email messages or portions thereof. Alternatively to reading the calling party's